

CLAIMS:

1. A platen for supporting the polishing material in a chemical mechanical polishing system, comprising:
 - a body adapted to support a polishing material during processing; and
 - a substantially rigid non-planar upper support surface defining an upper surface of the body for supporting the polishing material.
2. The platen of claim 1, wherein the upper support surface is concave.
3. The platen of claim 1, wherein the upper support surface is convex.
4. The platen of claim 1, wherein the upper support surface includes both convex and concave portions.
5. The platen of claim 1, wherein the upper support surface includes an inner region and at least one outer region, wherein the inner region and outer region are at different elevations.
6. The platen of claim 1, wherein the body is rotatable.
7. The platen of claim 1, wherein the body is fixed.
8. The platen of claim 1, wherein the upper surface of the body is textured.
9. The platen of claim 8, wherein the texture upper surface further comprises:
 - a plurality of grooves formed in the upper surface of the body.
10. The platen of claim 1, wherein the upper surface of the body further comprises:
 - one or more raised portions on the upper surface defining a mounting

surface; and

a recessed area defined by the one or more raised portions.

11. The platen of claim 1, wherein the body further comprises:
magnetic device for coupling the polishing material to the upper surface.

12. The platen of claim 11, wherein the magnetic device further comprises:
at least one of a magnetic or electromagnet.

13. The platen of claim 12 further comprising:
a magnetically couplable material coupled, embedded or fixed to the
polishing material.

14. The platen of claim 1, wherein the body further comprises:
vacuum port open to the upper surface.

15. The platen of claim 1, wherein the body further comprises:
polishing fluid delivery port open to the upper surface.

16. A platen for supporting the polishing material in a chemical mechanical
polishing system, comprising:
a body adapted to support a polishing material during processing;
a substantially rigid non-planar upper support surface defining an upper
surface of the body for supporting the polishing material; and
a plurality of recesses formed in the upper support surface.

17. The platen of claim 16, wherein the recesses are grooves.

18. The platen of claim 17, wherein the upper support surface has at area
having a concave cross section.

19. A chemical mechanical polishing system comprising:
 - a platen having a non-planar, substantially rigid upper support surface;
 - a polishing material disposed on the upper support surface; and
 - a polishing head adapted to retain a substrate against a working portion of the polishing material during processing.
20. The chemical mechanical polishing system of claim 19, wherein the upper support surface further comprises:
 - at least one recessed area formed therein;
 - at least one area projecting above the recessed area and defining the non-planar surface.
21. The chemical mechanical polishing system of claim 19, wherein a distance between the upper support surface and a plane defined by a lower surface of the polishing head is not uniform: